

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

1. (Currently Amended) A ~~Method~~ method of manufacturing a chill block, comprising:

forming a first surface of a chill block from a first material; and

chemically bonding a second material to the first surface, wherein the first material is steel ~~and the first surface has a thickness of the first material of less than about 0.5 inches.~~
2. (Cancelled)
3. (Original) The method of claim 1, wherein the second material is a copper metal.
4. (Cancelled)
5. (Currently Amended) The method of claim 1, further comprising bonding ~~[[a]]~~ the third material to a side of the second material that is not in contact with the first material.
6. (Original) The method of claim 1, further comprising machining the chill block after the step of bonding the second material to the first material.
7. (Original) The method of claim 5, further comprising:

machining the chill block after the step of bonding the second material to the first material; and

machining the chill block after the step of bonding the third material to the second material.

8. (Original) The method of claim 5, wherein the third material is steel.
9. (Original) The method of claim 1, wherein the first surface is formed in a ceramic mold.
10. (Original) The method of claim 1, wherein the chill block is formed in a ceramic mold.
11. (Currently Amended) The method of claim ~~[[2]]~~ 1, wherein the steel is chosen from the group consisting of ANSI H13, ANSI A2, and ANSI S7.
12. (Original) The method of claim 3, wherein the copper metal is beryllium copper.
13. (Original) The method of claim 1, wherein a surface hardness of the first material is at least 30 Rockwell “C” scale (Rc).
14. (Original) The method of claim 1, wherein a surface hardness of the steel ranges from about 30 to about 70 Rc.

15. (Currently Amended) A method of manufacturing a chill block, comprising:

using a rapid solidification process to spray a first material that forms a first layer of a chill block; and

using said rapid solidification process to spray a second material onto a first surface of the first layer, said second material comprising copper wherein the second material is chemically bonded to the first layer ~~wherein the first layer has a hardness ranging from about 30 to about 70 Rc.~~

16. (Original) The method of claim 15, wherein the first layer has a thickness of less than about 0.5 inches.

17. (Cancelled)

18. (Original) The method of claim 15, wherein the first layer has a thickness of less than about 0.5 inches and a hardness ranging from about 30 to about 70 Rc.

19. (Currently Amended) A chill block, comprising:

a chill block base having a top surface and a bottom surface and comprising a first material; and

a first layer of a second material chemically bonded to the top surface of the chill block base ~~wherein the second material has a thickness of less than about 0.5 inches.~~

20. (Cancelled)

21. (Original) The chill block of claim 19, further comprising a layer of a third material bonded to the bottom surface of the chill block base.

22. (Original) The chill block of claim 19, wherein the chill block base is made from a material comprising copper.

23. (Cancelled)

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)

27. (Cancelled)

28. (New) The method of claim 1, wherein the first surface has a thickness of the first material of less than about 0.5 inches.

29. (New) The chill block of claim 19, wherein the second material has a thickness of less than about 0.5 inches.

30. (New) The method of claim 15, wherein the first layer has a hardness ranging from about 30 to about 70 Rc.